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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/041,038	12/28/2001	Dmitri E. Nikonov	42390P13380	1947

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EXAMINER

KIM, ELLEN E

ART UNIT

PAPER NUMBER

2874

DATE MAILED: 03/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/041,038

Applicant(s)

NIKONOV ET AL.

Examiner

Ellen Kim

Art Unit

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AW

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8-15 is/are allowed.
- 6) ☐ Claim(s) 1,3,6,7 and 16-22 is/are rejected.
- 7) ☒ Claim(s) 2,4 and 5 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

Claims 16-22 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Applicant claims "alignment stage", and "alignment stage allows six degrees of freedom for movement of the optical fiber". Applicant, however, fails to describe the detail of the alignment stage structure. For the purpose of examination of this application, Examiner considers the "alignment stage" as any alignment means.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, and 16-19 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Huber [USPAT 5,187,760].

Huber discloses a wavelength selective coupler for high power optical communications comprising an optical fiber 18 having a polished side coupled to a planar waveguide circuit [fig. 4]. Huber teaches at column 4, lines 7-20 that energy is

transferred from one optical fiber to another. Therefore, it is clear that coupling the optical fiber to the planar waveguide inherently does a method of testing.

In re claims 16 and 17, it is clear that the polished surface 16 [fig. 1], itself functions as an alignment stage, and it also allows more than 6 six degree of freedom.

In re claims 18 and 19, a laser source is shown in fig. 7, and a photodetector is shown in fig. 9.

Claims 20-22 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Stevenson et al [USPAT 5,585,634].

Stevenson et al disclose a radiation transmission optical fiber comprising a polished side [fig. 4] until the core is exposed, an alignment stage 48 [fig. 5a], a light source 54, and a detector 62.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

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consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Huber as applied to claim 1 above, and further in view of Elion [USPAT 4,243,297].

Huber discloses every aspect of claimed invention except for the index-matching fluid as an interface between the first optical probe and the planar lightwave circuit.

Elion teaches at column 2, lines 34-37 that the index-matching fluid helps to reduce reflection losses and crosstalk. Therefore, It would have been obvious to the ordinary skilled person in the art at the time the invention was made to modify Huber's device to include the index-matching fluid to reduce reflection losses and crosstalk between the optical fiber and the lightwave circuit. It is clear that this would improve the device.

Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huber.

Huber discloses every aspect of claimed invention except for the method of testing the optical pathway prior to/after permanently attaching optical fibers to the PLC die. Examiner notes that Applicant claims the "prior to and after...", and Applicant fails to establish the criticality of the method of "prior to and after...". Therefore, It would have been obvious to the ordinary skilled person in the art at the time the invention was made to modify Huber's optical pathway to be tested either prior to or after permanently

attaching optical fibers to the PLC die for the purpose of easier manufacturing purpose of the device.

Allowable Subject Matter

Claims 2, 4, and 5 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 8-15 are allowed.

The following is a statement of reasons for the indication of allowable subject matter: the prior art does not disclose or suggest a method of testing a planar lightwave circuit comprising all the specific elements with the specific combination including a method of coupling a second optical probe having a second side-polished optical fiber to the planar light waveguide circuit, and using the second optical probe in combination with the first optical probe to send and receive a light beam through the planar lightwave circuit as set forth in claims 2, 8-15; including a method of adding an additional layer of upper cladding to the planar lightwave circuit after removing the first optical probe as set forth in claim 4; and including a method of testing the optical pathway on a PLC wafer prior to dicing the PLC wafer as set forth in claim 5.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Further references of interest are cited on Form PLO-892, which is attachment to this office action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ellen Kim whose telephone number is (703) 308-4946. The examiner can normally be reached on Monday and Thursday.

Ellen E. Kim
Primary Examiner
February 19, 2004/EK

A handwritten signature in black ink, appearing to read 'EEK', is positioned to the right of the typed name 'Ellen E. Kim'.